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AUTHOR McBrayer, John
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ABSTRACT

The Resource Center for Competency Based Education (CBE) is described in terms of background, structure, goals, and functions. Also provided is an introductory orientation to CBE approaches currently in use in higher education. A collection of brief essays which is included explores the more speculative and integrative dimensions of competency based approaches and outcome-oriented topics in higher education institutions. Citations of 133 books, reports, and papers related to the philosophy, rationale, concepts, issues, and measures of CBE, and a list of 37 consultants conclude the report. (Author/CHV)

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University of Wisconsin
WEST CENTRAL WISCONSIN CONSORTIUM
Resource Center for Competency-Based Education

Director: John McBrayer,
The University of Wisconsin System

University of Wisconsin-La Crosse
Main Hall-204B
1725 State Street
La Crosse, WI 54601

TECHNICAL REPORT 1:

Resource Center for Competency-Based Education Handbook

Submitted

by

John McBrayer

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

January, 1977

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Introduction

Background and Purpose

The Resource Center for Competency-Based Education at WCWC serves two major thrusts. One primary function is to serve as a systemwide or statewide competency-based education developmental resource for the UW System in its efforts to develop an Extended Degree Network. The other thrust is to serve as a consortium resource assisting in instructional system development on WCWC campuses developing model projects which are focusing on, or, considering focus on a competency-based approach.

The Center's overriding most critical service is one of providing technical support, filling gaps in design, compiling state-of-the-art information, researching the requisite knowledge base, and assisting with implementation and data analysis. Activities of the Center, thus, are primarily related to the areas of instructional design, development, and/or improvement. The Center works to assist campus faculty members in questions pertaining to a theory or the notion of competency, to translation of credit courses to competencies, to objectives, to instructional procedures, to evaluation procedures, and/or to other general ways of pulling together an effective instructional design.

The Resource Center, thus, has responsibilities for providing information services, consultative services, facilitative liaison services between campuses and available system resources, and for providing general services necessary to develop and refine competency-based instructional techniques.

Technical Paper 1 serves the need of providing an introduction to the Center and the need of providing an introductory source or orientation to CBE approaches currently in use in higher education. The collection of brief essays in this technical paper explore the more speculative and integrative dimensions of competency-based approaches and outcome-oriented topics in higher education institutions.

Structure of the Center

The CBE Resource Center staff for the first year will include a director and a part-time secretary. The Center director reports to the Executive-Secretary of the West Central Wisconsin Consortium and the Co-Directors of the Extended Degree Program of the University of Wisconsin System. The Center will provide unique developmental capabilities via its close association with the Extended Degree Programs under the Provost of University Outreach.

Goals of the Center

As mentioned earlier, the Center's most critical service is one of providing technical support, i.e., filling gaps in instructional design, compiling state-of-the-art information, assisting in the development of assessment formats, researching the requisite knowledge, assisting with program or project initial implementation, and assisting with data information collection, analysis, and evaluation.

General goals at the Center then, are: (1) To serve as an informational resource center on programs, materials, personnel,

and grants in the area of competency-based education; (2) To provide liaison and consultation services to other campuses in the design and implementation of their degree completion programs; (3) To encourage use of systemwide resources and participation of interested faculty and staff at all institutions in the Center's developmental efforts, including the Center's own institution; (4) To develop and maintain high quality evaluation procedures for all of the Center's activities; and, (5) To participate as a member of the UW-Extended Degree Program's policy development and quality program monitoring team in relation to the competency-based education.

Specific objectives of the Center are to: (1) assist faculty members in developing competency-based curricular and resource offerings so that students, particularly nontraditional students, can receive the benefits of current well-developed materials; (2) offer appropriate training to faculty to enable them to incorporate available instructional capabilities into competency-based programs; and, (3) To refine current methods of student and peer group instructional evaluation procedures at the departmental level to provide constructive feedback to each faculty member concerning his or her strengths and areas needing improvement in developing competency-based instructional techniques.

Center Strategy

The Center strategy at WCWC is based on a higher education team problem-solving approach. The problem of how to develop instructional skills in higher education, in order to shape skills

academically so as to optimize their transference and utilization in non-academic environments, is a problem of immense proportions and implications. Even current conceptions of competencies and skills that ought to be the focal point of higher education are controversial and poorly understood. Faculty investigators seeking ways to improve the quality of instruction need technical support in their efforts.

The Center staff and faculty investigators, in combination with administrators, provide a valuable higher education instructional system development team. The Center staff will work in team fashion with interested key faculty investigators and administrators in order to confront current problems and to further instructional design improvement and program development by applying and utilizing competency-based technology as a primary means of technical support. The Center's hope is that administrative staffs will help provide instructional team development coordination for faculty investigative, organizational or developmental, and evaluative efforts. It is felt that competency-based education technology can best work when a total team approach is applied.

Center Functions

In addition to the previously mentioned faculty support efforts, the Center will engage in a continuous literature search and prepare annotated bibliographies and other informational resources for distribution. Hopefully, the Center will establish a systemwide corps of CBE Center associates interested in CBE

research, CBE consultation and CBE facilitation throughout the state. Finally, the Center will develop a workshop format for faculty campuses developing Extended Degree programs or for faculty members wishing training in order to become CBE Center associates.

The Realm of CBE Technology

In 1974, Houston and Jones noted that:

> "Competency-based education has attracted more attention, more advocates and more antagonists than any other recent movement in education. Within its short history, 17 states have proposed CBE as an alternative means to certify teachers, 131 universities operate CBE programs, federal projects mandate it, AAUP damns it, researchers decry its lack of supporting evidence, and proponents employ it as a way to collect such evidence... The basic assumptions of CBE are difficult to refute...

Today, the realm of competency-based technology is still expanding, drawing both deep interest and consideration, concern and controversy. In higher education there are many opinions on definitions and conceptualizations of CBE, but basically the form and context of CBE can be described in terms of three distinct methodological approaches: the professional or job-specific approach, the generic competency approach, and the discipline-mastery approach. Each of the three approaches base its claim on characteristics which are usually described as being essential to competency-based frameworks. Correspondingly, each of the approaches have the following

characteristics:

1. Explicit objectives (sometimes referred to as competencies).
2. Assessment criteria are competency-based, specify mastery levels, made public, and occur in multiple modes.
3. Assessment is primarily based on performance.
4. Student time-free, self-paced progress rate which depends on demonstration of competency for movement.
5. Space-free (on-off campus) learning.
6. Individualization, student option or individual choice of learning activities (self-directed learning).
7. Systemic instructional design.
8. Personalized Instruction.
9. Feedback.
10. Exit requirement emphasis.
11. The instructional design is intended to facilitate the development of competencies specified.
12. Student achievement accountability and instructional design or program accountability.

It is thus, no wonder that faculties and administrators are often presented with confusing conceptualizations of competency-based education. Arriving at clear definitions of the terms competence, competency, and competent without an understanding of the methodological context or approaches in which the terms are being used, can sometimes be a somewhat frustrating task. The remainder of this paper seeks to provide the information that is necessary to preclude such frustration.

The Notion (Theory) of Competence

True competency-based education programs logically begin with a notion or theory of competence. Competency-based programs are based on a set of assumptions about competence from which can be derived statements concerning consistent regularities necessary in instructional systems designed for effective learning outcomes. Consequently, a prerequisite question before the specification of any lists of desired competencies is "What is your notion or theory of competence?" Or, the closely related question, "What do you mean by competence?" The definition of competence is a crucial presumption upon which one bases a theoretical conception of CBE programs. Educators should not attempt to specify or identify competencies until they have a clear understanding of what a definition of competence implies.

Competence is usually accurately defined as a person's "adequacy for the task." Similarily, the adjective "competent" refers to a person's "ability to do." Competence, is thus, a characteristic ability of an individual. These simple definitions of competence tend to cause people to minimize the importance of the concept in the development of a competency-based education program. Interpretations of the definitions have a tendency to focus on the "doing" or performance behavior implied by the definition, rather than the statement of ability which is the real major implication of the definition for CBE program. Competence springs from development of ability. The characteristics, qualities or abilities of persons that permits them to perform in a manner that

enables them to accomplish the task is their competence. Competence is not performance. Performance is what a person actually does. Performance may or may not be judged competent. A person's performance may reflect his competence, just as, a person's competence level will in part explain his or her performance.

A basic premise of competency-based education is that understanding the nature of the ability (i.e., the particular competence) that is to be developed will enable instructional system developers to be more precise in selecting instructional procedures, materials, and methods to meet the needs of students. The basic idea is to raise the competence level of students. Before this is to be accomplished however, assumptions concerning the competence should be stated.

Stating Assumptions

Assumptions are statements of what is thought to be desirable. The assumptions that one makes tend to provide direction for the entire program of instruction. Assumptions suggest the conceptual framework of the instructional system. In CBE programs an important assumption is that ability can be developed, or that a person's competence level can be raised to higher levels.

In order to state assumptions, questions concerning the ability (or abilities) of the student that enable the student to perform appropriately in a particular area of study must be asked and answered. For example, "What knowledge attitudes and skills should the student possess if the student is to be competent in the areas he or she is to study?", or "What happens to the student as a result

of having studied a particular course of study?" The designers of a CBE program must know what they are doing in the program and why they are doing it. They must recognize, for example, that a competency-based approach must realize the competence level of one student differs from that of another at any moment in time and they must provide instruction which takes this fact into account. After assumptions are stated and the instructional developer's mission is clear, competence statements may be derived.

Deriving, Identifying, or Specifying Competence Statements

In professional programs, after assumptions are clearly stated, competence statements may be derived through literature searches, certification requirements, and analysis of model professionals who possess the desired knowledge, attitudes, skills, and proficiencies. In professional programs where list of job-specific knowledge, attitudes and skills can be identified as necessary for development of desired competence levels, the knowledge, attitudes and skills are usually referred to as "competencies".

Some programs which take a Discipline-Mastery approach to CBE also develop list of "competencies". Usually these list of competencies refer to behavioral or instructional objective statements which specify course content which the student must demonstrate if he or she is to be judged competent enough to complete the course material of the discipline.

In programs that emphasize the development of generic competencies, however, neither of the above competency identification

methods seem appropriate, so a different approach is used. In generic CBE, competence statements are derived from assumptions about what is necessary to develop students capable of leading productive lives in today's radically changing world. All students are limited by their developing capacity, i.e., by what they are capable of doing at any given time. Competence statements in generic CBE programs, then, are statements of the student's fully developed capabilities when limits on the capabilities are removed.

The process of specifying competencies begins with two basic assumptions; assumptions about the nature of the content to be learned or how the content can be used as a tool to develop crucial capabilities in the student, and, assumptions about the nature of the learner. For example, the content of a course may have intricate complexities that are difficult to learn. The content, in effect, is causing limits on what the student is capable of doing for a given time. The generic approach is to capitalize on the particular difficulty that is causing limits on the student by using the content to develop problem-solving skills, critical thinking skills, information processing skills, etc., in the student. In the process, the student must sort out data to which he has access to discover regularities and acquire a system from data received by the senses to generalize principles that can be applied. Both the content or data received and his ability to establish the qualities of relatedness of successive information become a part of the student's mental equipment and build the student's internal competence.

Organization of Competence Statements

When competence statements have been specified, they should be reviewed in terms of whether or not they are stated so that cues can be given for changing them from usually hypothetical and unvalidated constructs to teachable and assessable objectives. Generally, competence statements should include at least two cues by which the desired capability shall be developed.

The first of these cues is a process factor. This factor should clarify the particular implied capability or talent subsumed in the competence statement regardless of the context in which it occurs. Is, for example, the student supposed to be able to synthesize, apply, interpret, comprehend, or evaluate? When the process is clear, the competence statement is more precise.

The other characteristic cue of each competence statement should be an indication of the "area of responsibility" or context the capability is to occur. When process or context factors are not clear, problems may result in designing instruction for appropriate learning outcomes. The overriding distinction of CBE is on its emphasis on learning outcomes.

Notes on the Generic Approach to CBE

The heart of the challenge of the generic competency-based movement is in its primary aim, i.e., it seeks to develop crucial human capabilities. "Competence" is viewed as a close surrogate word for "capability". Competency-based education proposes to matriculate competent graduates. As Wooditsch (1976) has noted:

> "When it makes this proposal with an eye toward behaviors and roles currently sanctioned by society, CBE doesn't differ overly much from our better traditional examples of vocational education. The task is one of shaping students in accord with some societal blueprint. But when CBE proposes graduates who are capable of leading productive lives in a radically changing world, whatever the blueprint, it sets its foot where there is no path."

Generic CBE embraces and focuses upon extraordinary capabilities such as the development of critical thinking skills, communication skills, information processing skills, problem-solving skills, and value clarification skills. In short, it seeks to pursue tenaciously the development of those capabilities man has been known to employ in its best moments. Wooditsch (1976).

The undergirding assumption is that acquision of these extraordinary competencies entails an improved capacity to identify and master the many more specific competencies that society in its various moods will come to require of the student. If we build the student's generic capabilities, he or she will then apply them in whatever specific shape his situation and his purposes require.

As Wooditsch (1976) has stated:

> "We have here something very close to the rhetoric of general, or liberal, education. The only difference is that competency-based education, while nodding compassionately with the rhetoric, keeps asking about results. If traditional general education responds at all, it does so by somewhat grumpily allowing that it is not much given to identifying generic competenceis and exloring how they might better be developed. The shift from rhetoric to results requires a major shift in education pshychology."

The notion of generic competencies transcends disciplinary considerations and flow from a professional attitude that sees instructional activity as perennially problemmatic--always in need of reconstitution in light of new and deliberately sought evidence. That is the point of CBE's emphasis on "outcomes". Specification of outcomes prompts examination and enables us to better reformulate and reassess this business of achieving more of the human potential.

Although generic competencies involve constructs that remain largely hypothetical and unvalidated, generic competency-based education still attempts to define what is meant by success in later life, how that success is attained, and how one knows it is attained. Schlesinger (1976).

If there is a bridge between academics and non-academics, proponents of generic competencies believe it is based on the competencies that academics seek to develop to help their students as they enter the real world, i.e., those relatively straightforward performance capabilities. Schlesigner (1976).

Litwin (1976) derived the following essential characteristics of competency-based frameworks from his understandings of CBF at Alverno, Mars Hill, Sterling, College at Massachusetts (Boston), Grand Valley State, Florida State, Colgate II, Governors State, and Bowling Green.

- Time-Free (self-paced)
- Space-Free (on or off campus)
- Individual Choice of Learning Activities (at times negotiated or prescribed)
- Personalized Instruction
- Explicit Objectives
- Self-Evaluation for Readiness to test
- Self-Directed Learning
- Multiple Modes of Evaluation (simulations, tests, jury exams, etc.)

Some examples of generic competency approaches follow.

Minnesota Metropolitan State College Profile

This urban college, uses twin cities facilities, and has no campus. It admits students on the basis of demonstrated competence, not on the basis of courses taken. The student designs his/her goals and the means to achieve them. The curriculum aims to develop students who can demonstrate a capability to learn without college and earn his way in a contemporary changing economy. The college offers a Bachelor of Arts without a major. The diploma refers to the enumeration of competencies contained in the student's narrative transcript. Educational format:

- Application and Admission, Orientation
- Education pact development, implementation of pact, and final evaluation

Five Competence Areas:

Basic learning and communication,
Civic Involvement, Professional,
Vocational Career Competencies,
Leisure and Recreation Competencies,
Personal growth and development/
Personal and Social Awareness

The Community College of Vermont Profile

CCV students are rural students who lack access to traditional educational programs. The college utilizes a competency-based learning program format and it is committed to education that is not terminal. The student is to continue learning and adapt to change. Student ages are 16 to 70. The curriculum utilizes a variety of learning modes. All programs are considered as "journeys in individual growth." The college operates in three communities with no campus. All credit courses must meet objectives determined by an Advisory Council. Each site must meet the Community College of Vermont requirements. As students choose and articulate educational goals, learnings are evaluated through the use of measurable instructional objectives. The college awards degrees when competence is demonstrated in three major areas: Intellectual Competence, Social Competence, Physical and Manual Competence. Students work through guidelines which specify skills required to be competent in the particular area. Guidelines are developed by the State Advisory Council. Education format:

Admission, orientation, exploration,
contract to complete, and final
evaluation

School of New Learning - DePaul University

Competence framework is grouped into five broad categories (The World of Work, Communications and Interpersonal Relations, The Human Community, Quality of Life, and Lifelong Learning), and there are 48 competencies which each B.A. student must demonstrate in order to complete the degree program. These competencies provide the structure for the entire SNL experience. The competencies are skills, knowledges, attitudes and values, which are stated in general terms, but are translated into specific areas of content in each student's program and in the SNL course offerings. Competence statements consist of five facets which are descriptive--clarifying a range of possible valid directions for interpreting each competence. For most competencies, at least two facets should be present to demonstrate college-level attainment. Still other possibilities may involve faculty members creating their own facets, enhancing the range of meanings within the generalist competence approach. The competence framework leads to the Bachelor's Degree.

College IV of Grand Valley State Colleges

College IV offers a totally self-paced program and offers the alternative of granting credit by means of a modulemobile. For would be students, step in pay is $6.50 in tuition, plus 45 cents to $3.50 for one or more minicourse modules. When they've completed their modules at home, they can take a test for mastery. Scores of 90 percent or better is considered mastery and one half credit is granted. Remedial help or tutoring from instructors is available. Ten successful visits to the modulemobile constitute the academic equivalent of a five credit, quarter term course.

Contact with campus instructors is encouraged.

Bowling Green's Modular Achievement Program (MAP)

Has noted that, under ideal circumstances, achievement criteria and levels of competency would be defined only after they were known to be fundamental predictors of human performance. Without such data, MAP was virtually left to produce a new set of criteria and to experiment with its usefulness. While willing to do this, MAP has not been willing to endanger the future academic career of students; thus, it has taken the approach that it would only define a set of competencies that students should hold, but would also guarantee that this set would include proven competence in traditionally defined areas. It was MAP's hope that a group of students would emerge who not only had achieved in traditional areas, but who also had an additional set of competencies that MAP wished to suggest as defining the general education component of the baccalaureate.

Mars Hill College

According to Knott (1976), the college viewed the competency-based curriculum as a means of facilitating change by stating the priorities of the instructional program in terms of specific outcomes, and encouraging change to occur toward realization of those outcomes. Knott points out that competency-based curriculum change can be viewed from a faculty development program based on: (1) the principle of personal meaning; (2) organizational clarity; and (3) institutional rewards. At Mars Hill, there are seven

basic competencies which students are expected to possess. Professors choose the competence area in which they want to work. After they choose an area, they become a part of a larger faculty contracted to that program. The contract states explicitly the program areas in which any faculty will be working.

The first thing the faculty member has to do upon selecting an area is demonstrate that he or she has that competence. Often the faculty member must do considerable work before he or she is able to demonstrate the competence.

After demonstrating the competence, the second requirement of faculty is to examine skills of instruction, counseling, advising, and evaluation, which are necessary in order to assist the student in attaining the competence.

The analysis of necessary skills leads to identification of the developmental needs of each faculty member. The administration at Mars Hill had to generate $400,000 to support faculty change over the past two years.

Organizational clarity required a redesign of total faculty responsibilities so that faculty who were getting into the design of new programs could receive credit for program reform activities. Thirty-five thousand dollars was set aside to be used as reward for those faculty who involved themselves in program activities in addition to the faculty development program.

Mars Hill defines competence as a state of having requisite abilities or qualities. A competence-based curriculum is one in which the competences expected of all graduates are defined, agreed upon and publicly stated, and where there are sets of learning experiences designed to assist the student in achieving those

competencies.

There are three distinct functions involved: (1) the stating of competencies; (2) the organization of the actual learning experiences which form the curricular structure of the institution; and (3) the development of sets of evaluative criteria which define the achievement of competencies.

As mentioned, there are seven basic competencies for general education at Mars Hill briefly stated:

1. Competent in communication skills.
2. Use knowledge gained in self-assessment for his own personal development.
3. Comprehends values of his own culture and analyzes relationship of other cultural values and can appraise influence of those values in society.
4. Understands the nature of aesthetic perception and is aware of the significance of creative and aesthetic dimensions of his own experience which he can compare to other cultures.
5. Understands the basic elements of scientific method of inquiry, applies it by acquiring and analyzing information which lead to scientific conclusions and appraises those conclusions.
6. Has examined attempts to achieve a unified world view and is aware of broad philosophical questions and can assess the validity of answers in terms of consistency and his own position.
7. Is competent in an area of specialization.

Simply, stated competence areas are areas of knowledge or skill specialization.

Competence Statements

Some examples of competence statements that have been used at colleges are as follows:

Mars Hill College

I. A graduate of Mars Hill College is competent in communication skills.

II. A graduate of Mars Hill College can use knowledge gained in self-assessment to further his own personal development.

III. A graduate of Mars Hill College comprehends the major values of his own and one foreign culture, can analyze relationships of values between the cultures and can appraise the influence of those values on contemporary societal developments in the cultures.

IV. A graduate of Mars Hill College understands the basic elements of the scientific method of inquiry, applies this understanding by acquiring and analyzing information which leads to scientific conclusions, and appraises those conclusions.

V. A graduate of Mars Hill College has examined several attempts to achieve a unified world view and knows how such attempts are made. The graduate is aware of the broad questions that have been posed in the history, philosophy and religion of Western Civilization and can assess the validity of answers given to these broad questions in terms of internal consistency, comparative analyses and his own position.

VI. A graduate of Mars Hill College understands the nature of aesthetic perception and is aware of the significance of creative and aesthetic dimensions of his own experience which he can compare to other cultures.

VII. A graduate of Mars Hill College is competent in an area of specialization.

Minnesota Metropolitan State College
(a partial incomplete list)

Five competence areas are required of each student.

I. Basic Learning and Communication

1. The ability to find and use information.
2. The ability to write coherently.

II. Civic Involvement

1. The ability to actually participate in the civic decision-making process.
2. To demonstrate the ability to organize in a group to achieve a goal.

III. Professional, Vocational Career Competencies

1. Know about the range of occupational choices available.
2. Each student should understand the social and philosophical implications of his own behavior.

IV. Leisure and Recreation Competencies

1. The ability to demonstrate active and regular participation in individual and group recreation activities of one's own choosing.

2. The ability to develop a long-range plan for the use of one's time in the face of a radical change in life-style such as retirement.

V. Personal Growth and Development/Personal and Social Awareness

1. Ability to engage in self-assessment.
2. Ability to evolve a sense of personal identity.

Community College of Vermont

Intellectual Competence: The student must be able to think and act clearly:

a. Ability to use communication skills.
b. Ability to use critical thinking skills.
c. Ability to use analytical skills.
d. Ability to use methods of inquiry.
e. Ability to use values clarification skills.
f. Ability to use information gathering skills.

Social Competence: The student should have an awareness of himself in relation to society:

a. Ability to interact with the general public and community organizations.

b. Awareness of institutions within the community and their impact on the community.
c. Awareness of the relation of the community to the larger society and its history.
d. Awareness of the role of the individual in the community.
e. Awareness of the future of the community.

Physical and Manual Competencies: The student should be able to relate to the community through physical and manual means:

a. The ability to apply manual skills.
b. The ability to communicate verbally and/or creatively.
c. An understanding of man's relationship to his physical environment.
d. The ability to apply skills to modify the physical environment.

Northwest Regional Laboratory: Interpersonal Competencies by Dorothy Mial (partial incomplete list of the 15 competencies specified)

1. Self-awareness, self-acceptance, self-evaluation and esteem (as prerequisite both for use of self-actualization and for acceptance, use, actualization of others).

   1.1 Ability to collect data about self from others.
   1.2 Ability to disclose self appropriately to others, i.e., make available to them data which will enable them to give back helpful feedback.
   1.3 Ability to test or check out data feedback.

2. Ability to use self as a knowing, feeling, valuing, acting, person as teacher and as learner.

3. Awareness and acceptance of others.

   3.1 Ability to emphathize with learners.
   3.2 Ability to tolerate and appreciate differences from self (in values, language, patters of behavior).

4. Ability to help others reveal selves appropriately. This entails:

   4.1 Ability to learn.
   4.2 Ability to inspire trust.
   4.3 Ability to trust.
   4.4 Ability to give feedback helpfully.

Notes on Professional or Job-Specific CBE

The concepts underlying CBE are relatively straightforward. Competency statements are derived from the role of the practicing professional, explicitly stating what the learner is to demonstrate for successful completion of the program, and made public in advance of instruction. While such competencies may include cognitive objectives (what the prospective professional knows), the primary emphasis is on performance (what the prospective professional can do), and consequence objectives (what the effect of the prospective professional is on his clients). It seems more important that professionals be able to practice their art, and to bring about positive change in clients than simply to know about professional actions. Within a CBE program, learner progress is contingent upon demonstrating competencies. Assessment and Instruction are derived from and linked to competencies.

Thus, the total program is designed around statements of competencies--competencies assumed to be part of the integral role of a professional.

CBE is primarily an approach to instruction and the value of a specific CBE program depends largely on its competencies. Some institutions have made extensive literature searches, worked with practicing professionals, developed theoretical constructs, and finally designed an integrated program. Others have simply rewritten goals and activities for each of their courses into behavioral objective formats and called themselves CBE. Some programs have carefully edited their objectives and continued to improve assessment systems; others are not so much concerned with

continual revision and improvement. Some are committed to innovations; others to traditional approaches. Yet all claim to be Competency-Based. (Houston and Jones, 1974)

In an overview of this very comprehensive and current trend in personnel training known as that of a "competency-based" format, it is apparent that there exists certain and specific aspects of what constitutes a "total" program in competency-based methodology. These aspects are Competency Identification, Competency Analysis, Competency Organization, Competency Units, Competency Evaluation, and Competency Feedback. (Valeski, 1973)

Competency Identification. This is a subfactor descriptive of the existence and credibility of assumed competencies within a given professional area.

Retrieval of these may follow: (1) the deductive hypotheses that literature descriptors, certification and licensing requirements, and graduate level course contents reflect the ideal skills and proficiencies, or that (2) a field-based evaluation or needs assessment method shall provide the potential competencies for consideration in the developmental model.

Competency Organization. It is essential that competencies be structured into teachable and measurable structures. Assumedly in every given competency statement there exists two measures (which require separation for the purpose and development of organization and structure) by which that competency shall be trained.

The first of these measures is termed a process factor. By this we may clarify the particular capability of talent subsumed

in the competency statement regardless of the context in which it occurs. Also, characteristic of each competency statement, is the "area of responsibility" or a content factor.

There is difficulty in training where the range of terminology regarding process, as well as, that of content, is overlapping, non-descriptive, and lacking in specificity for purposes of training.

Competency Analysis. It is further necessary to reduce these areas into specific "training components" or to analyze the process (or function) - content (or context) description into more specific elements by which behavioral objectives regarding those elements may be written, trained practiced, and evaluated.

Competency Units. Specific items of information within the content of the given competency statement are generally structured as self-contained learning packages. Literature reviews describe these packages as "learning modules", "units", training packages, etc. Each label, however, commonly represents a trainable, integrated procedure able to be evaluated. A single unit of competency-based instruction would necessarily allow for adherence to a selected format:

1. A statement of the competency to be trained;
2. Pre-designated process and content factors;
3. Component analysis of the content within the competency statement;
4. Instructional method and media to represent those components, and
5. Expected "outcomes" or "products" of the learner.

Evaluation. Participation in the performance objective unit does not ensure competency itself. Without given success criteria (i.e., rating, percentages of accuracy, attitudinal changes), and the observation of these criteria, it is unlikely that one can be assured that competence has been attained. Highly uncorrelated evaluation criteria are not of use in appraising competency.

Feedback. Procedures in revision or restructuring developed competency-based programs by which known effects, transferabilities, or the actual efficacy of the competency statement itself is appraised in a laboratory or field based setting by the trainer. Comparative information essential to the trainer to evaluate the effects of training and the efficacy of programmed competencies, is reprocessed later for restructuring.

Competency-based education, then may be viewed as a "process" that includes five interrelated operations:

1. The basis for decision making about development and implementation is clearly defined.
2. Outcomes for students and programs are specifically and operationally defined.
3. Program design is congruent with both student and program outcomes.
4. Student and program outcomes are evaluated periodically.
5. Operations within the process are revised and/or specifications are changed according to feedback from the evaluation. (AACTE, 1975)

The entire process may be analyzed in terms of four interrelated storage and retrieval systems:

1. A competency specification subsystem that specifies competencies in behavioral terms.

2. An evaluation subsystem that relates assessment devices to specified competencies.

3. An instructional subsystem that consists of instructional modules or teaching-learning units designed to achieve specified performances.

4. A management subsystem that comprehensively and effectively combines the competency specification, the assessment devices, and the instructional modules in the education of particular professionals.

Performance or Competency-Based Programs (in Professional Education)

Essentials Elements

1. Competencies to be demonstrated are role-derived specified in behavioral terms and made public in advance.

2. Assessment criteria are competency-based, specify mastery levels, and made public in advance.

3. Assessment requires performance as prime evidence, takes student knowledge into account in evaluating behavior and strives for objectivity.

4. Student's progress rate depends on demonstrated competency.

5. Instructional program facilitates development and evaluation of specific competencies.

Implied Characteristics

1. Individualization
2. Feedback
3. Systemic Program
4. Exit Requirement Emphasis
5. Modularization
6. Student and Program Accountability

Related, Desirable Characteristics

1. Field-Centered
2. Broad base for decision-making
3. Protocol and training materials
4. Student participation in decision-making
5. Research-Oriented and Regenerative
6. Career Continuous
7. Role Integration (Elam, AActe)

Notes on Discipline-Mastery Approaches to CBE

Discipline-mastery, or mastery learning approaches, have recently appeared in higher education institutions. Because they share many of the characteristics of competency-base programs, some claim that they are CBE programs. Discipline-mastery approaches, however, have an overriding focus on the development of course content mastery rather than the development of competence levels within the student. The discipline-mastery approach may be either norm or criterion-referenced. When it is criterion-referenced, it seems somewhat akin to the competency approach, but, the "competency" may be little more than a new way of demonstrating that the student "remembered his or her facts."

There are two basic strategies from which most contemporary discipline-mastery approaches are derived. They are Bloom's (1968), "Learning for Mastery" strategy, and Keller's (1968), "Personalized System of Instruction" (PSI).

Bloom's approach begins by formulating what is meant by mastery of the course. This entails formulation of a set of instructional objectives that all students will be expected to achieve to a particular mastery performance standard by the course's end. Then the course is broken into a sequence of smaller learning units where each unit typically covers the course objectives contained in about two weeks instruction and the materials in one unit builds directly upon the materials in the previous units. Next, the instructor constructs brief, ungraded, student-scored, diagnostic-progress tests called "formative" evaluation instruments for all learning units. These instruments will provide the instructor with

detailed information or feedback about each student's grasp of each unit's objectives. The instructor then prepares a set of alternative learning materials or instructional correctives keyed to these formative tests. These correctives teach the unit's objectives, but they do so in ways different than the instructor's group-based presentation. The instructor, having designed his instructional system, begins teaching the first unit's instruction using his usual group-based instructional mode, but rather than moving on to the next unit when the first unit is completed, he administers the unit's formative evaluation instrument in order to determine how each student is achieving. He certifies the progress of those students who are achieving as desired and who are not to use the instruction correctives to complete their learning of unmastered objectives. The student is then given the responsibility to use the correctives as necessary to complete his learning of the first unit's objectives before the instructor begins the group-based instruction on the second unit. The instructor follows this cycle until all units are completed then he administers a final "summative" exam which is the sole determinant of the grade.

The essential features of Keller's PSI are:

a. The go-at-your own pace feature, which permits a student to move through the course at a speed commensurate with his ability and other demands upon his or her time.

b. The unit-perfection requirement for advancement which lets the student go ahead to new materials only after demonstrating mastery of that which preceded it.

c. The use of lectures and demonstrations as vehicles of motivation, rather than sources of critical information.

d. The related stress upon the written word in teacher-student communications.

e. The use of proctors which permits repeated testing immediate scoring, almost unavoidable tutoring, and a marked enhancement of the personal-social aspect of the educational process.

The instructor begins by defining mastery by defining the course objectives. Then these objectives are subdivided into a number of learning units which require a week to master. The instructor then develops instructional procedures whereby the student might master the unit's objectives. The student then proceeds through each unit at his own pace. At the end of the unit the student is administered a unit exam by a proctor. Then, the proctor judges the student's performance, if it is perfect, the student is commended, and is allowed to proceed to the next unit. If not, the student is asked to review before retesting. The student can be assisted in his review by proctor tutoring, or, the student may restudy the original materials. This testing, review, retesting cycle continues until the student can demonstrate perfect performance on the unit. In sum, the rudiments of PSI are: self-pacing, learning units or modules in which written tests evidence content mastery, and the employment of students as proctors or tutors.

Glossary

WCWC - John McBrayer

Accountability - Refers to the ability to provide a rationale for actions which are planned and implemented, the responsiblity of limiting promises to situations where sufficient control is possible so that the individual or organization can legitimately be held to account for the outcomes obtained, the willingness to be held responsible for the outcomes which are actually achieved. Kelley (1974).

Assessment - The procedures designed to provide feedback on the effectiveness of an instructional system. The data provided by assessment includes the appropriateness of the match between objectives or desired learning outcomes and instructional procedures in terms of the resulting effect on students.

A different concept of assessment is employed in the implementation of a competency-based program. In such a program, assessment involves criterion-referenced and formative assessment, in addition to the commonly used summative assessment. Assessment is criterion-referenced because the progress of the student is measured against his own personalized objectives rather than against the progress of others. Assessment is formative because assessment procedures are used to determine the competencies that the student lacks prior to graduation.

Brokering - The process of matching the needs of the individual students to appropriate programs of study offered by the university system and of matching the individual students characteristic academic profile and past experience to program requirements in order that the student learning efforts are not unnecessarily duplicated and progress toward completion of program requirements are maximized.

Competence - "Adequacy for the task" or "possession of required knowledge, skills, and abilities." Howsam and Houston (1972).

Competency - Is used to indicate an emphasis on the "ability to do" in contrast to the more traditional emphasis on the "ability to demonstrate just knowledge or knowing."

Competency-Based Learning Programs - Competency-based education is distinctive in its overriding focus on defining and measuring outcomes of learning. Competence is usually defined as the "ability to do". Competency-based education seeks to develop the "capability" within students through systemic instuctional processes which focus

upon: (1) explicit statements of the expected outcomes of the learners; (2) explicit statements of criteria-referenced performanced-based assessment of learning; (3) self-paced student progress based on periodic evaluations of the student's competence; (4) revisions of operations within the instructional system according to feedback from evaluations.

Competent - Is used to designate the level of ability--the level of competency.

Contract Learning - The student, with faculty guidance, plans his program of study and contracts or comes to an agreement with his instructors on the objectives to be accomplished and the manner in which the objectives will be accomplished. Specific objectives are usually agreed upon with no restriction upon how the student learns. Usually with the approval of a faculty committee, a contract is drawn between the student and the school, binding the student to fulfill the program of study and the school to provide credit for the course of study.

Extended Degree - A traditional baccalaureate degree program which can be accomplished in a large part off the campus where the degree is offered. Usually upper division courses are offered in a time-free, space-free program. The degree is usually offered to adult students.

External Degree - A baccalaureate degree unusually characterized by flexible possibilities for each person as he or she considers individual limitations of time, location, financial circumstances and ways to learn. Usually developed to accommodate the adult student.

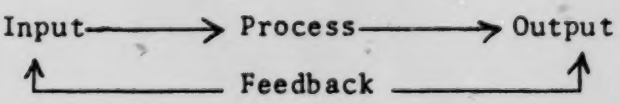
Life Studies Competency Areas - Program of study which stress generic competencies. Generic competencies focus upon the development of critical thinking skills, communication skills, information processing skills, problem-solving skills and value clarification skills. In short, the program seeks to pursue tenaciously the development of those capabilities man has been known to employ in his best moments.

Module - A previously defined instructional package organized around a specific performance objective that provides the totality of enabling and/or learning experiences (including rationale, objectives, prerequisites, pre-assessment, instructional activities, materials needed, post-assessment and sometimes remediation procedures) that facilitate the student's achievement of an objective or set of objectives.

Objective - Explicit statements of the criteria to be met by the learner as a sign of successful completion of the learning activities--the specification of the outcome to be obtained.

Open University - Usually refers to methods for providing access to more training and education for each person by means and forms other than the traditional. It is usually based on the British Open University concept, i.e., no prerequisites to enter or to graduate other than completing the required number of courses, and the student must be 21 years of age. Open learning is a process characterized by unusually flexible possibilities for each person as he or she considers individual limitation of time, location, financial circumstances and ways to learn.

Systemic Approach - An approach that accounts for all of the variables in the education process and leads to a self-renewing program. All inputs to the curriculum must be accounted for; these inputs are the available resources. The inputs are processed by the system to meet specific goals, developed on assessed needs. The resulting output or product then can be evaluated against the defined criteria, yielding appropriate feedback information that is recycled as new input for processing by the system.



Informational Resources

Related to the Resource Center for Competency-Based Education

For further information about philosophy, rationale, concepts, issues, and measures related to the Competency-Based Education the following books and reports are recommended. These reports are currently available in the Resource Center for Competency-Based Education. This briefly annotated list of papers, articles, and reports related to CBE will be expanded every three months as new resources become available. To receive copies at cost of copying or borrow on loan, please contact:

Dr. John McBrayer, Director
Resource Center for Competency-Based Education
Main Hall - Room 204-B
1725 State Street
La Crosse, Wisconsin 54601

1. Competency-Based Education Mini-Practicum
by John McBrayer
(150 pages)

Consists of a module cluster to enable participants to become familiar with the terminology of competency-based education, the terminology of instructional objectives, the terminology of modules, and models for specification of competencies in career related areas. The module is intended to provide an initial introduction to the basics of CBE. The approach is basically a CBTE approach to CBE.

2. Three Views of Competency-Based Teacher Education:
1. Theory
by Joel Burdin
A Phi Delta Kappa Fastback #48
Order from: Phi Delta Kappa
Eighth and Union Box 789, Bloomington, IN 47401
(38 pages)

Discusses C/PBTE as a training alternative with promises and problems. Questions and issues raised in the discussions include Basic Characteristics of C/PBTE, Implied Characteristics of C/PBTE, some Working Examples, some critical concerns and problems.

3. Three Views of Competency-Based Teacher Education:
2. University of Houston
by W. Robert Houston and Howard L. Jones
A Phi Delta Kappa Fastback #49
Order from: Phi Delta Kappa
Eighth and Union Box 789, Bloomington, In 47401
(29 pages)

Describes the CBTE Program at University of Houston, its underlying rationale, program design, and implementation procedures. It is not presented as an exemplar for other programs, but simply as a description of how one group went about the task of improving teacher education. Leads the reader to a description of several activities in the CBE program and the rationale for their inclusion.

4. Three Views of Competency-Based Teacher Education:
3. University of Nebraska
by Edgar Kelley
(29 pages)
A Phi Delta Kappa Fastback #50
Order from: Phi Delta Kappa
Eighth and Union Box 789, Bloomington, IN 47401

This booklet is addressed to the increasingly serious question of whether or not CBTE and PBTE can foster meaningful change in Teacher Preparation Programs. To illustrate issues, the author uses specific examples drawn from the NUSTEP program at the University of Nebraska. NUSTEP an acronym for Nebraska University Secondary Teacher Program, is one of the handful of performance-based teacher education programs of 1971. Its comparative longevity is one of the characteristics which make NUSTEP a valuable source for identifying both the promises and problems of PBTE and CBTE.

5. Renewing Higher Education: The Competency-Based Approach
Editor: Vance T. Peterson
The Center for the Study of Higher Education
The University of Toledo
(102 pages)

This monograph is the end-result of a regional American Association for Higher Education Conference held at the University of Toledo in April, 1975 entitled, "Learner-Centered Reform: Truth or Competences?" The ten essays appearing in this volume come from several current leading spokesmen for the competency-based position in Higher Education. Among the topics discussed are: the ageless debate over the relevance of liberal versus practical subjects, faculty renewal, the impact of reform on student, the validation of excellence, and the technology of curriculum change.

6. Higher Education Consortium on Assessment: Project Prospectus
by Institute for Competence Assessment
(9 pages)

The prospectus introduces and provides information on how to participate in the Higher Education Consortium on Assessment (HECA). It describes the consortium and its five areas of focus. It discusses the major activities of the consortium, the three levels of participation that are possible, the criteria for membership, and how to participate. It also contains a brief description of the Institute for Competence Assessment.

7. Testing for Competence Rather Than for "Intelligence"
by David C. McClelland
(14 pages)

This well known paper, published in the American Psychologist in 1973, provides the background philosophy and key issues in testing which form the basic rationale for HECA.

8. Concepts and Issues Related to the Identification, Measurement and Validation of Competence
by Paul S. Pottinger and George O. Klemp
(78 pages)

This is the most current, major conceptual paper for HECA. It elaborates on current problems in competency-based assessment and suggests some solutions. It also describes several important prototype measures of learning outcomes related to liberal arts and the professions.

9. Techniques and Criteria for Designing and Selecting Instruments for Assessing Teachers
by Paul S. Pottinger
(57 pages)

This paper was presented to the Multi-State Consortium on Performance-Based Teacher Education at its Denver conference in November, 1975. It briefly discusses the social and scientific impetuses for change in assessing teaching performance, and it proposes a new model for measuring variables that are covert and causally related to superior performance in teaching. The model is applicable to other professions as well. This paper is one of several chapters presented in the following document (#4).

10. Licensing and Accreditation in Education: The Law and the State Interest
Edited by Betty Levitov
(163 pages)

The essays in this report were written by Larry Freeman, Sheila Huff, Paul Pottinger and Michael Rebell. This paperback book was published by the Study Commission on Undergraduate Education and the Education of Teachers in 1976. It presents the papers and proceedings of the November, 1975 Denver conference of the Multi-State Consortium on Performance-Based Teacher Education. The paper mentioned above (#3) is only one chapter of this book, which presents significant discussions of the law, courts, teacher credentialling reform, education program approval, institution and program reviews, uses of evidence, due process for students and institutions, institutional barriers to implementing CBTE, and a special summary report on the conference.

11. Comments and Guidelines for Research in Competency Identification, Definition and Measurement
by Paul S. Pottinger
(27 pages)

This paper was written in 1975 for the Educational Policy Research Center, Syracuse University Research Corporation under a contract from the National Institute of Education. The author discusses problems, issues and guidelines for research according to three basic areas: Identification and Definition of Competencies; Instrumentation, Techniques and Processes; and Standardization or Establishment of Levels of Performance. Seven corollaries to these headings are presented. Implications for research and for change are briefly discussed in the conclusion. This paper is one of six in a series on competency-based education. For information about the entire series, contact the Educational Policy Research Center, Merrill Lane, University Heights, Syracuse, NY, 13210 re: Contract #NIE-400-75-0036.

12. Final Report to the Fund for the Improvement of Postsecondary Education (FIPSE)
by Paul S. Pottinger and George O. Klemp
(36 pages)

This paper reports the outcomes of a contract to McBer and Company in 1974-75 which led to the establishment of the Institute for Competence Assessment. It is a precursor to paper #2 above. There is little information in this report that does not appear in more lucid and elaborate form in papers #2, #3, and #5 above.

13. ICA Assessment Techniques: An Abridged Catalog:
by George O. Klemp
(8 pages)

This brief paper describes some of the tests that are being used by HECA members and by other public and private sector organizations to assess competence. Prices of tests and sample kits are provided. This document will be printed in more elaborate and comprehensive form in 1977.

14. Some Comments on the Effective Use of Consultants and External Advisors
by Paul S. Pottinger
(6 pages)

This paper provides some basic considerations that should help project directors decide how to determine if a consultant is needed, how to choose the proper consultant, how to most effectively use outside help, and how to evaluate the quality and worth of outside help.

15. A Competency Model for Human Resource Management Specialists in the United States Navy
by David C. McClelland
(14 pages)

This paper presents a competency model for human resource managers. While it was developed for the Navy's Human Resource Management Program, it is a generalizable model. Nine competencies are linked to five major tasks of counseling, and 16 measures are linked to the identified competencies. This report is part of ongoing work with the Navy by McBer and Company. It represents developing efforts to link competency identification, definition, measurement and training into a cohesive, validated and cost-effective model.

16. Validation of a Human Service Worker Test
by David C. McClelland and Susan T. Fiske
(48 pages)

Under contract with the Executive Office of Manpower Affairs and in collaboration with the Massachusetts Civil Service Commission, the authors developed a test package for the selection of human service workers. In-depth job analyses determined which state positions were suitable for broad-banding under the title of human service worker and what skills were necessary for successful human service work. Based on that analysis, the authors selected several tests suitable for assessing the skills desirable in an entry-level worker in the field. The tests were validated on human service workers already on the job. Five indices were found valid and reliable.

17. The Objective Measurement of Prejudice and Discrimination: Final Report
by George O. Klemp
(31 pages)

This report summarizes basic research carried out under a contract from the Office of Naval Research to investigate prejudice as interpersonal learning interference. A programmed case learning technique was developed and proved to be effective in measuring inaccurate information processing as a function of prejudice. This study led to further research which supports the programmed case method as a reliable and valid measure of human relations skills. Revised programmed cases are being utilized in HECA to test their validity and utility for assessing interpersonal skills.

18. Faculty Evaluation in Competency-Based Education Programs
by Mark T. Munger
(29 pages)

This paper is a chapter appearing in a book titled Mutual Benefit Evaluation of Faculty and Administrators in Higher Education by William J. Genova, et. al. (Ballinger Publishing Company, Cambridge, Mass., 1976). The author asks questions and provides some answers about competency-based education in general and faculty instructional performance in particular. He discusses purposes, sources and methods of faculty evaluation in competency-based programs. A new seven-step approach to faculty evaluation is described and some implementation issues are discussed.

19. Project Information Form

This form, for those who are interested in participating in HECA research and other activities, provides questions intended to help ICA decide how it can be of assistance to planned or ongoing assessment projects.

20. The Foundations of Competency-Based Education
by Robert T. Utz and Leo D. Leonard
Kendall/Hunt Publishing Company, Dubuque, Iowa, 1975
(184 pages)

In this book the areas of History, Philosophy, and Sociology have become intimately associated with the search for educational goals and means through the strategies of competency-based education. The focus is quite specifically on the usefulness of Educational Foundations in implementing a competency-based curriculum.

21. Resources for Performance-Based Education
by Robert W. Houston
New York: New York State Department, Division of Teacher Education and Certification and Multi-state Consortium on Performance-Based Teacher Education, 1973
(241 pages)

A catalog of PBTE materials in use in PBTE programs across the nation.

22. Performance Education: A General Catalog of Teaching Skills
Editor: Richard L. Turner
Multi-State Consortium on Performance-Based Teacher Education and Leadership Training Institute for Protocol Materials
(336 pages)

A catalog of generic and specialized teaching skills in selected areas of teacher preparation.

23. Resources for Performance-Based Education: Supplement A
Editor: W. Robert Houston
The University of the State of New York
The State Education Department of Teacher Education and Certification
Multi-State Consortium on Performance-Based Teacher Education
(193 pages)

A catalog of potential resource materials for PBTE from program developers across the country.

24. Handbook for the Development of Instructional Modules in Competency-Based Teacher Education Programs
by R. L. Arends, John A. Masla, W. A. Weber
Copies also available for $3.00 from: The Center for the Study of Teaching - 117 Bacon Hall, 1300 Elmwood Avenue, Buffalo, New York 14222
(78 pages)

An overview of CBE, objectives, modules, and guidelines for designing Instructional Modules.

25. Systems Analysis and Learning Systems in the Development of Elementary Teacher Education Models
by Walt LeBaron
National Center for Educational Research and Development, 1969
(47 pages)

General principles and theoretical discussions of models, systems analysis, and learning systems are presented with examples drawn from ten elementary education models funded by USOE.

26. "Is CBTE Cost-Effective? Competency-Based versus Non-Competency-Based Teacher Education"
by Donald F. Enos
Journal of Teacher Education Summer, 1976
(3 pages)

A recent research study which indicates that CBTE is cost-effective when contrasted with a non-CBTE approach.

27. "Project Change: A Person-centered Approach to CBTE"
by Thomas Lickona
Journal of Teacher Education, Summer, 1976
(7 pages)

Discusses Project Change, a master's level program in person-centered education for teachers, at State University Cortland, New York. The program is based on the belief that the goal of education should be to support the development of the person, the growth of permanent qualities like the ability to think confidence in oneself, and a capacity to relate to others. Competence is defined broadly in terms of new personnel growth.

28. "A Model for Developing Academic Support of CBTE"
by William Capie and Glenn Markle
Journal of Teacher Education, Summer, 1976
(3 pages)

Describes the model for developing academic support of CBTE which has evolved in the science areas of the University of Georgia.

29. The Power of Competency-Based Teacher Education: A Report
Editor: Benjamin Rosner
Boston: Allyn and Bacon, 1972

This report of the Committee on National Program Priorities in Teacher Education is theoretical and futuristic in tone. The opening chapter by Richard Turner postulates criteria which could be used to assess the effectiveness of teacher education programs. The levels of criteria formulated provide a distinction between PBTE and CBTE programs.

30. Taxonomy of Teaching Roles and Corresponding Competence Areas or Anatomy of A Transformationally Oriented Performance-Based Teacher Education Program
by Lewis J. Sinatra
State University College at Buffalo (1972)
(37 pages)

A taxonomy of teaching roles has been developed. A chart which depicts these roles and corresponding areas of competence is presented.

31. Personalized Systems of Instruction at the University of Wisconsin-Oshkosh: The State of the Art
by Keith Voelker
Program Development Center, 1976

Describes Personalized Systems of Instruction as they have developed at the University of Wisconsin-Oshkosh, and systematically defines the variations that have evolved. In effect, presents the "state of the art" at the university for use as a guide in developing future systems.

32. Instrument for Evaluating Your Concept of Teaching Competence
by Charles E. Johnson
University of Georgia
(11 pages)

Multiple choice instrument for evaluating your concept of "teaching" competence.

33. Product Listing of Objectives-Based Test Sets, Measurable Objectives Collections, and Planning Aids for K through 12
(2 pages)
by Instructional Objectives Exchange
P. O. Box 24095
Los Angeles, California 90024

34. A Question of Competence: Language, Intelligence and Learning to Read
by Justin Fishbein and Robert Emans
Chicago: Science Research Associates, 1972
(227 pages)

Asks that teachers contemplate "What is the student's competence?" What is the why of materials and approaches? Presents the basis for a theory of competence.

35. Performance-Based Teacher Education: A 1975 Commentary
by AACTE Task Force
One Dupont Circle
Washington, D. C. 20036
(13 pages)

A useful summary of the state of the Art of PBTE in 1975.

36. Systems and Modeling: Self Renewal of Teacher Education
by Donald Haefele
American Association of Colleges for Teacher Education
One Dupont Circle, Washington D. C. 20036, 1971
(102 pages)

Collectively, these papers reflect stages of thought and action proposals which educators can use in responding to demands for better programs, sharper skills, and deeper knowledge. The Comprehensive Elementary Teacher Education Models are presented as a rich source of alternatives.

37. Final Report: A Competency-Based, Field-Centered, Systems Approach to Elementary Teacher Education
by Northwest Regional Educational Laboratory, 1968
Editors: H. Del Schalock and James R. Hale
(730 pages)

Discuss in detail the conceptual framework of one of the earliest CBTE models, The Comfield Model, a model that is the forerunner of many contemporary CBE models.

38. Elementary Teacher Training Models: Nine Program Models submitted to the U. S. Office of Education
Editor: Evelyn J. Blewett
The Office of Education, 1969
(66 pages)

Summarizes one and a half million dollars worth of change in nine Elementary Teacher Education Programs funded in 1967. These nine models formed the basic foundations for the CBTE movement of the late sixties and early seventies.

39. PBTE: The Politics of Teacher Competence
Editor: Theodore E. Andrews
Multi-State Consortium on Performance-Based Teacher Education, Volume 3, No. 6, December, 1974
(12 pages)

Presents essays on performance-based teacher education.

40. Politics of Competence: A Review of Competency-Based Teacher Education
by John G. Merrow II
National Institute of Education, 1974
(95 pages)

Provides a review and interpretation of CBTE activity nationally. Includes a bibliography, and a series of perspectives by people who either helped shape the "competency-based" concept, or who are now responding to the concept's shaping force.

41. A Module for Understanding the Characteristics of Competency-Based Education
by Alberto Ochoa
Teacher Corps Associates
University of Wisconsin-Madison, 1973
(34 pages)

A modulated instructional system for development of one's knowledge on CBTE.

42. Planning for Program Development
Editor: Sarah C. White
A Report of a Statewide Conference for Professional Educational Personnel
(159 pages)

Presents working papers on program development of certification programs for educational personnel using a CBTE approach.

43. The Industrial Education Teacher's Professional Tasks
by The Industrial Teacher Education Competency Study Committee
Department of Industrial Teacher Education
School of Industry and Technology
University of Wisconsin-Stout
Menomonie, Wisconsin 54751
(65 pages)

Presents a generic list of the Industrial Education Teacher's Professional Tasks

44. Development of a Base for the Re-evaluation of the Professional Segment of the Master of Science Degree Program in Industrial Education at the University of Wisconsin-Stout
by Lawrence S. Wright
Graduate College
University of Wisconsin-Stout
Menomonie, Wisconsin 54751
(47 pages)

The study presents an approach to developmental efforts and tasks analysis of performances required for successful performance as an industrial education teacher.

45. Planning for A Performance-Based Teacher Education Program: A Final Report
by George E. Dickson
The University of Toledo, 1972
(251 pages)

Reviews and evaluates the entire CBTE effort at the University of Toledo.

46. Performance-Based Teacher Education: What is the State of the Art
by Stanley Elam
AACTE, 1975

The classic paper on an overview of the PBTE movement, discusses definitions, history, issues, and concerns of PBTE.

47. Achieving the Potential of Performance-Based Teacher Education: Recommendations
by AACTE, 1974
American Association of Colleges for Teacher Education
One Dupont Circle
Washington, D. C. 20036
(41 pages)

A paper that further clarifies terminology, calls attention to pitfalls and potentialities, and provides suggestions to maximize the attainment of the potentialities and steps to avoid pitfalls.

48. Developing Instructional Modules
by W. Robert Houston et al.
College of Education, 1972
University of Houston
Houston, Texas 77002
(188 pages)

The purpose of this publication is to facilitate the development of instructional modules by improving the competence of module developers. It was designed to model the approach to instruction. Included are several instructional units pertaining to module development.

49. A Seminar on Competency-Based Teacher Education for University Personnel
by Horace Leake
Teacher Corps Associates, 1973
University of Wisconsin, Madison
(18 pages)

This paper is intended to help institutions of Higher Education present the basic tenants of CBTE to its faculty in a simple, easily understood manner.

50. Protocol Materials Development Project
by the Center for Education in the Social Sciences
University of Colorado, 1974
(39 pages)

A Protocol Materials Unit on "Conceptualizing the Process of Instruction."

51. The Bambi Collection
by John Reed Williams
Teacher Corps, 1972
Emporia, Kansas 66801
(70 pages)

A comprehensive listing of all materials on PBTE and other Teacher Corps emphasis available at the Teacher Corps Resource Center.

52. Competency-Based Teacher Education at State University College at Buffalo
by John A. Masla
Teacher Corps, 1974
(34 pages)

Presents an overview of CBTE as perceived by this Teacher Corp Project, reviews their progress, and presents a sample module cluster.

53. A Competency-Based Approach to the Study of Curriculum Development
by J. H. Littrell
College of Education, 1974
Kansas State University
(150 pages)

A module cluster for Teacher Education on curriculum development.

54. Competency-Based Teacher Education
by Anderson, Cooper, Devault, Dickson, Johnson, Weber
(123 pages)
McCutchan Publishing Corporation
2526 Grove Street
Berkeley, California 94704

Provides an in-depth analysis of the competency-based teacher education approach and strong argument for its superiority over traditional programs. An emphasis on implementation of CBTE via application of the systems approach is also discussed.

55. Exploring Competency-Based Education
edited by W. Robert Houston
(425 pages)
McCutchan Publishing Corporation

Explores the basic meaning of competency-based education; appraises the basic concepts underlying CBE; describes several models for identifying competencies and considers basic dimensions of assessment and evaluation. It also examines the change process involved and provides a bibliography.

56. Principles of Instructional Design
by Gagne and Briggs
(201 pages)
Holt, Rinehart, Winston, Inc.

The book describes both the derivation and the application of methods which can be used to design topics, courses and lessons of instruction in a variety of subjects, based upon principles of human learning and performance analysis. These methods are also related to the design and evaluation of instructional systems.

57. Competency Assessment, Research, and Evaluation
Edited by W. Robert Houston
(272 pages)

A report of a national conference on C/PBE which discusses in depth the frames for conceptualizing CBE and five major areas of research on CBE.

58. Behavioral Objectives and Instruction
by Kibler, Barker, Miles
(196 pages)
Allyn and Bacon

Represents an effort to identify the important functions behavioral objectives can serve in improving instruction. It presents material relative to behavioral objectives from a variety of sources in a single volume. It also provides a variety of sample behavioral objectives.

59. Shifting and Winnowing: An Exploration of the Relationship Between Multi-Cultural Education and CBTE
Editor: Carl A. Grant
(253 pages)

Sixteen authors explor the relationship between multi-cultural education and CBTE.

60. Competency-Based Teacher Education
Edited by Houston and Howsam
(181 pages)
Science Research Associates Inc., 1972

The book focuses on five areas related to competency-based teacher education--objectives, curriculum design, evaluation, certification, and consortia.

61. Competency-Based Instruction: A Strategy to Eliminate Failure
Edited by Nagel and Richman
(98 pages)
Charles E. Merrill Publishing Company, 1972

A branching programmed text for anyone interested in learning more about instructional development using CBE. It seeks to provide a clear and concise statement, relatively free of jargon about what competency-based instruction is and what its value parameters and methods should be.

62. Mastery Learning: Theory and Practice
Edited by James H. Block
(152 pages)
Holt, Rinehart, Winston, 1971

The book brings together for the first time the basic mastery ideas and the relevant supporting research. It discusses procedures for implementing a mastery research and presents an extensive annotated bibliography of mastery learning research.

63. Schools, Society and Mastery Learning
Editor James H. Block
(148 pages)
Holt, Rinehart, Winston, 1974

The book introduces the reader to mastery learning theory, practice, and research. It also sketches some of the theoretical economic and sociological implications of mastery learning to highlight some of its practical implications.

64. Systems in Teaching and Learning
by Robert Filbeck
(137 pages)
Professional Educators Publication Inc., 1974

Discusses the systems approach, instructional systems, identification of objectives, preparation of materials, implementing the instructional system and evaluating the instructional system's effectiveness.

65. Partners for Educational Reform and Renewal
by Dickson, Saxe et al.
(307 pages)
McCutchan Publishing Company, 1973

The book describes massive educational change in Toledo, Ohio. The process is based on multi unit schools, individually guided education and competency-based teacher education. The reader is informed on ways to effectively link the above elements together to improve schools.

66-71. School Based Teacher Educator:

Number 2: Rationale, Role Description and Research

Number 3: A National Survey of School Based Teacher Educator Credentialing Process

Number 4: Teacher Centers in Texas The State of the Scene

Number 5: Clinical Experiences and Clinical Practice in Professional Education

Number 6: A Task Analysis of Staff Development in Personnel in Selected Public School Districts

Number 9: Project Report of First Year Activities

by Houston, Cooper, Warner et al.
Teacher Center
University of Houston, 1976

Reports of a project to improve teacher education in Texas by developing a set of competency specifications for the role of school based teacher educators and to develop a cooperative network among Texas Teacher Centers for developing competence of school based teacher educators.

72. Competency-Based Undergraduate Education Project: Recent Trends in History Curricula and Pedagogy: A Bibliographic Study
by Cappuzzello, Schlesinger et al.
Bowling Green State University, 1976

Reviews the character and quality of literature on history curricula and pedagogy of the last five years from a competency based undergraduate educational development perspective. Provides extensive bibliographies that pertain to CBE and curriculum development in this disciplined area.

73. General Education in American Colleges and Universities: A Precis on Assumptions, Issues and Occurrences
by Mark A. Schlesinger
CUE Center
Bowling Green State University
Bowling Green, Ohio, 1976
(19 pages)

Notes evolution of basic tensions between higher education and education for the few, between learning "for its own sake" and learning as a practical instrumentality; traces three traditional conceptions of general education's proper role, and explores curricular practices illustrating those conceptions.

74. CUE Project Annual Report 1974-1975
by G. Woditsch and R. C. Giardina
CUE Center
Bowling Green State University
Bowling Green, Ohio, 1976
(27 pages)

Summarizes the activities and developed projects of the Competency-Based Undergraduate Education Center, as well as, the on line program activities of the University Division of General Studies at Bowling Green State University.

75. Self-Paced Course on Problem Analysis and Decision-Making
by Arthur A. Atkisson
Environmental Administration
University of Wisconsin-Green Bay
(14 pages)

Presents a request for an undergraduate teaching improvement grant which would provide funding for a project to develop a lower-division, self-paced, task-oriented, competency-based two semester course. The rationale or need for the course and proposed project elements are also provided.

76. Re-Thinking the Comprehensive Assessment Plan
(Draft)
by Allan Hartley
Educational Research and Development Center
University of Wisconsin-Green Bay, 1976
(8 pages)

Discusses the Program Evaluation and Related Costs Model developed by Palola et al., at Empire State College which seeks to relate educational outcomes and costs to three major sources of variation: students, programs, and faculty. The model focuses on the overall question of "What kinds of students working in what kinds of learning programs with what kinds of faculty change in what ways at what cost?"

77. A Precis of the CUE Center
by Gary Woditsch
CUE Center
Bowling Green State University
Bowling Green, Ohio 43402
(3 pages)

Explains the operational structure, goals, center strategy, and center functions, of the Competency-Based Undergraduate Education Action-Research Center at Bowling Green State University.

78. Competency-Based Undergraduate Education
A Summary of Information Sources
by CUE Center
Bowling Green State University
Bowling Green, Ohio 43402
(5 pages)

A summary of information sources which focuses primarily on the materials and institutions that address competency-based undergraduate education and liberal education program development.

79. Developing Generic Skills: A Model for Competency-Based General Education
(Draft)
by Gary A. Woditsch
CUE Center
Bowling Green State University
Bowling Green, Ohio, 1975
(49 pages)

Presents a model for competency-based general education. In so doing, the paper discusses the issues and concerns related to the development and exercise of generic cognitive skills and to the development of competence in the application of generic skills.

80. Competency-Based Undergraduate Education Action-Research Center: Progress Report and Renewal Request
by Gary Woditsch and R. C. Giardina
Bowling Green State University, 1976
(36 pages)

Discusses implications of generic skills for post-secondary institutions and reviews the CUE Center's second year activities and accomplishments. Lists publications and reports prepared by the CUE Center.

81. Development of Problem Solving Skills for Vocational and Education Achivement: Teacher's Manual
by Arthur E. Whimbey, et al.
Washington State Superintendent of Public Instruction
Washington, 1975
(54 pages)

A teacher's manual for development of problem-solving skills based on work done by Whimbey to increase comprehension and reasoning abilities and methods developed by Benjamin Bloom. The game of Wff 'N Proff is also discussed.

82. Heuristics for the Development of ACBTE Program
(Draft)
by Castelle G. Gentry
University of Toledo, 1971
(2 pages)

A collection of pragmatic rules for program adoption, derived from change and innovation literature and from the University of Toledo experience.

83. Is My School Program Valid
by Castelle G. Gentry
University of Toledo, 1971
(2 pages)

A short questionnaire for quick brief analysis of a teacher education program.

84. A Practical Management for Performance-Based Teacher Education
(Draft)
by Castelle G. Gentry and Charles Johnson
University of Toledo, 1971
(28 pages)

Presents an in-depth discussion of management heuristics for the development of a CBTE program.

85. CBE Management System Outline
The University of Toledo Model
(3 pages)

Outlines conditions required, components required, organizational units, and major tasks required by CBE program managers.

86. Competency-Based Teacher Education at the University of Houston
by Teacher Education Center
University of Houston
(14 pages)

Provides a brief discussion of the competency-based teacher education program at the University of Houston.

87. Perceived Relative Importance of Thirty-three Competencies
by W. R. Houston
College of Education
University of Houston, 1975
(15 pages)

The study analysis of perceptions of 1,512 teachers on most desired and least desired generic teaching competencies.

88. "Why CBTE?"
by Higher Education and Planning, September/October, 1976
(2 pages)

A brief reprint of the University of Texas' Donald Enos study entitled, "In-service Education: A Cost-effective Prospectus." The Enos study is among the first experimental research projects to compare competency-based teacher education with a non-competency-based approach. His conclusion favors competency-based instruction.

89. Competency-Based Education
Seminar Presentation by Wes L. Face
University of Wisconsin-Stout, 1976
Menomonie, Wisconsin 54751
(11 pages)

Presents an insightful general interpretation of CBE and is intended as an introduction to the topic.

90. Summary Report: University Forum on Competency Based Content in Business, Industry, and Education
Edited by Larry Wright
University of Wisconsin-Stout
Menomonie, Wisconsin 54751
(40 pages)

The paper discusses six topics about competency-based education:

1. What is it?
2. Who has interest in it?
3. The general, professional, and technical components
4. Examples of content for implementation
5. Implementing competency-based content
6. Where do we go from here?

91. Competencies and Facets: School for New Learning
by DePaul University
23 E. Jackson Boulevard, Chicago, Illinois 60604, 1976
(25 pages)

This paper presents the competence framework of the School for New Learning including the descriptive facets for each competence statement.

92. Glossary (For Resource Center for CBE Purposes)
by John McBrayer
WCWC, 1976
(4 pages)

Presents some operational definitions used in the specific programmatic thrusts of the Resource Center.

93. A Theory of Competence for Specification of Competencies (Draft)
by John McBrayer
WCWC, 1976
(8 pages)

The paper emphasizes the importance of having a theory of competence before proceding with a development of a CBE program. The importance of the basic notion of competence is often overshadowed by the emphasis on performance. A brief sketch of generic competencies in colleges is presented.

94. CBE Technology, Non-traditional Learning and University System Development Specialist: An Approach to Change
by John McBrayer
WCWC, 1976
(8 pages)

The paper discusses the change strategy of systematic development in terms of the example the University of Wisconsin is providing in efforts to develop nontraditional learning-extended degrees in a competency-based education format.

95. An Introduction to Competency-Based Teacher Education: An Annotated Bibliography of Multimedia Materials
by Marjorie A. Benedict
Teacher Education Developmental Service
State University of New York
Albany, N. Y., January, 1975
(4 pages)

An annotated bibliography of multimedia on CBTE.

96. Competency-Based Education: A Bibliography
by Office of Research and Development
University of Toledo, November, 1972
(11 pages)

A listing provided to assist educators to become informed about the development of competency-based teacher education.

97. Competency-Based Education: A Bibliography
by Helen Cox
Robert L. Pierce Library
University of Wisconsin 54751, June 30, 1976
(18 pages)

A listing that emphasizes 1970-1976 materials and adult career related competencies.

98. Resource Center for Competency-Based Education: Mission Statement and Mission Profile
by John McBrayer
WCWC, September, 1976
(4 pages)

Paper presents goals, objectives, and mission profile of the resource center.

99. Needs Assessment for Competency-Based Program Development
by Program Development Center
University of Houston
(6 pages)

A needs assessment instrument to help program developers determine "where they are" in beginning development of a CBE curriculum program.

100. Dimensions of the Student Biographical Inventory
by Bela O. Baker
Comprehensive Assessment Plan, August, 1976
University of Wisconsin-Green Bay
(41 pages)

The report discusses the Student Biographical Inventory and its use in the Comprehensive Assessment Plan at the University of Wisconsin-Green Bay. The Student Biographical Inventory (SBI) is a short questionnaire of diverse content. It is used primarily to identify systematic variations among students in order to account for differential reactions to various elements of the programs they undertake in college. It may be of use in competency-based program assessments.

101. Liberal Learning at Alverno College
by Alverno College Faculty
Alverno College
3401 South 39th Street
Milwaukee, Wisconsin 53215
(42 pages)

This pamphlet explains the eight competence areas of the Alverno College Curriculum.

102. Competency Assessment Program: Specification of Developmental Levels: Competences 1-8
by Alverno College Faculty
Alverno College, 1973
Milwaukee, Wisconsin 53215
(18 pages)

Paper explains developmental levels of competences 1-8 of the Alverno College curriculum.

103. Competence-Based Learning Program: Competences and Developmental Levels
by Alverno College
Alverno College
Milwaukee, Wisconsin 53215
(1 page)

List competences and developmental levels at Alverno College.

104. Historical Development of CBL at Alverno
by Alverno College Faculty
Alverno College
Milwaukee, Wisconsin 53215
(4 pages)

This paper traces the initial development of competency-based learning at Alverno College in the period of 1969-1973.

105. Student Teaching Competencies
by Industrial Teacher Education Department
Dr. Lee H. Smiley
Industrial Teacher Education
University of Wisconsin-Stout
Menomonie, Wisconsin 54751
(11 pages)

A list of competencies and assessment criteria for determining criteria for an Industrial Teacher Education Department.

106. University of Wisconsin-La Crosse - School Psychology Program
by School Psychology Department at UW-La Crosse
University of Wisconsin-La Crosse
La Crosse, Wisconsin 54601
(1 page)

List sixty competencies for a school psychologist.

107. Annotated Bibliography: An Incomplete Draft College Outcomes Measures Project
by COMP
Aubrey Forrest, Director
College Outcome Measures Department
Research and Development Division
The American College Testing Program
P. O. Box 168
Iowa City, Iowa 52240
(12 pages)

Presents an annotated bibliography on books in the areas of general education reform, competency-based education, higher education curriculum, and higher education measurement.

108. UW-La Crosse Competencies of a Student Teacher in Health Education
by UW-La Crosse Health Department
University of Wisconsin-La Crosse
La Crosse, Wisconsin 54601
(8 pages)

An instrument designed for the evaluation of student health teachers.

109. Memo on: Policy Concerning the Grading and Recycling of Modules in the CBTE Program
by George Dickson, Dean
College of Education
University of Toledo
(2 pages)

States the University of Toledo policy on grading and recycling of Modules in the CBTE Program.

110. A Formative Evaluation of the Elementary Competency-Based Teacher Education Program at the University of Toledo
(Partial Draft Copy)
by Marcia Mutterer and others
University of Toledo, 1974
(40 pages)

Discusses the format of a CBTE program using the Stake Model.

111. Competence Assessment Program: Manual for Level 1
by Alverno College Faculty
Alverno College
Milwaukee, Wisconsin 53215
(53 pages)

The manual presents a procedure for training assessment teams to assess student competence at level one in the CBE program at Alverno College.

112. Technical Report 1: Manual for the Resource Center for Competency-Based Education
by John McBrayer
West Central Wisconsin Consortium
1725 State Street
La Crosse, Wisconsin 54601
(85 pages)

The manual presents an initial orientation to the CBE Center at WCWC and summarizes introductory concepts in the realm of CBE technology.

113. Delaware County Community College Life/Learning Experience Assessment (LEAP) Program Materials
by Staff and Euguene J. Kray, Dean of Community Education
Delaware County Community College
Media, Pennsylvania 19003
(225 pages)

A unique approach that combines CBE, Bloom's Taxonomy, and a Point System for assessment. Competency-based curricula and assessment materials for a life learning experiential approach includes:

1. a. Philosophy and general considerations
   b. How the life/learning assessment is done
   c. Instructions for students
   d. Chronological record form

2. LEAP competency-based objectives and assessment formats on the following courses:

   a. Introduction to Economics
   b. Human Relations
   c. Social Science Elective
   d. Human Behavior
   e. American Civilization
   f. American Government
   g. Accounting
   h. Programming and Systems
   i. Business Management
   j. Administration of Justice
   k. Applied Technology
   l. Executive Secretarial
   m. Hotel/Restaurant Management
   n. Fire Science Technology
   o. Principles of Economics I
   p. Principles of Economics II
   q. Business Law I
   r. Business Law II
   s. College Accounting I
   t. College Accounting II
   u. Elementary Statistics
   v. Principles of Marketing
   w. Business Organization and Management
   x. Math/Science Elective
   y. Communications and Humanities
   z. Retailing Management

114. Competency-Based Education in Child Guidance (212-264) Project
by Sherry Patterson, Susan Gifford, Jan Keil
School of Education
University of Wisconsin-Stout
Menomonie, Wisconsin 54751
(101 pages)

The results of instructional improvement grant to develop material in order to implement competency-based education in Child Guidance (212-264). Competencies of the course were identified, Learning Experiences were identified and categorized. Criteria for evaluation of competency attainment were determined. An impact evaluation is included.

115. Student's Guide to Participation in the Competency-Based-Degree Program - Oklahoma City University
by CBDP Staff Colyer, Westerheide
Oklahoma City University
Oklahoma City, Oklahoma 73106
(70 pages)

A complete description of all aspects of the liberal arts CBE program at Oklahoma City University which emphasizes both traditional and non-traditional approaches to learning.

116. PaCBTE Handbook: A Resource for Developing Competency-Based Teacher Education Programs
Edited by Sam B. Craig
Pennsylvania Department of Education, 1975
(96 pages)

A source of information for teachers which presents generic teaching competencies, role competency definition processes, CBTE research, assessment information, a glossary of CBTE terms, and the PaCBTE Consultant Group directory.

117. First Year Teacher Survey Results of 1975 Distribution
by Grace E. Laverty
Pennsylvania Department of Education, 1976
(22 pages)

Study reports which generic competencies were developed and used by beginning teachers.

118. PA. C/AC Program
Edited by Wallace M. Maurer
Pennsylvania Department of Education
(13 pages)

Pennsylvania's Approach to Competency Certification of Educational Professional Staff.

119. Competency-Based Education: A Process for the Improvement of Education
by G. E. Hall and H. L. Jones
Prentice-Hall Inc., New Jersey, 1976
(376 pages)

The book covers both the theory and implications for practices that have been developed and discovered in building CBE programs. Several successful CBE program efforts are described in detail.

120. Implementing Teacher Competencies: Positive Approaches to Personalizing Education
Edited by James Weigand
Prentice Hall Inc., New Jersey, 1977
(280 pages)

The book is aimed at aiding individuals acquire the basic teaching skills. Seven generic teaching competencies are discussed.

121. Curriculum of Attainments: Final Report August 31, 1976, The Florida State University
Submitted by Gary W. Peterson
Center for Educational Design
The Florida State University
Tallahasse, Florida 32306
(199 pages)

This document presents a self evaluation of the Curriculum of Attainments Project and serves as a heuristic handbook on implementing an attainment-based curriculum. A complete model for competency-based education is presented. The principal concept of the Curriculum of Attainments is that degrees are awarded solely on the basis of knowledge or skills (i.e., attainments) deomonstrated before faculty juries without regard to the location or the amount of time it takes a student to master them. COA is a completely time-variable, location-free curriculum which allows for continuous progress toward degrees. The experimental curricula include Biology, Nursing, Urban and Regional Planning, Music Education, Religion, Psychology, and Theatre.

122. Oklahoma City University Competency-Based Degree Programs: Student's Guide to Participation in the Competency-Based Degree Program
Submitted by W. J. Westerheide
Oklahoma City University
Oklahoma City, Oklahoma 73106
(39 pages)

This document presents an overview of the Competency-Based Degree Program at Oklahoma City University. The degree program is competency-based and uses a learning contract approach. Students contract in seven generic competency areas in order to obtain a degree.

123. Florida International University Competency System Materials.
Submitted by Jules O. Pagano
Florida International University
Tamiami Trail, Miami, Florida 33199
(11 pages)

Materials outline FIU competency system. Give sample breakdown of one competency and suggest stages for developing a competency-based curriculum. The approach is generic competency approach.

124. "Structuring Process to Improve Student Outcomes"
by H. D. Schalock in New Directions for Higher Education
Edited by J. B. Lon Hefferlin and Oscar T. Lenning
(29 pages)

This article describes the more promising of new instructional procedures, some of the factors that have given rise to their development, and the available evidence on their effectiveness. Mastery Learning, PSI and competency-based education are discussed. An extensive bibliography is also provided.

125.- 133 Mars Hill College Materials
Submitted by David Kniseley
Mars Hill College
Mars Hill, North Carolina 28754
(101 pages)

125. "Faculty Development in a Competence-Based Curriculum"
by Meeth, Hoffman, and Kniseley, 1973-1976
(28 pages)

Description of a project to assist the faculty to acquire the skills and resources needed to complete the design and initiate the implementation of a competence-based curriculum for all areas of the college.

126. "Competency-Based Curricula: Procedures and Problems"
(15 pages)

Discusses the liberal education curriculum when competency-based education is applied to it. Included are discussions of the concept of a competency-based curriculum, major philosophical consideration, objectives, assessment criteria, and problems of implementation.

127. "Recommendations Concerning the Competence-Based Curriculum and the 4-1-4 Calender"
by the Curriculum Committee, March 27, 1974
A. E. Jenkins, Chairman
(41 pages)

A partial list of recommendations concerning the creation of a competence-based Bachelor of Arts and Sciences degree and the continuation of the 4-1-4 calendar. Discusses the curriculum rationale and development of generic competences at Mars Hill.

128. "Mars Hill College Competence-Based Curriculum Statements, Requirements, Learning Experiences"
(16 pages)

Competence statements of curriculum at Mars Hill are presented.

129. "What is a Competence-Based Curriculum?"
(5 pages)

Presents a clarification of what is meant by competence in a liberal arts curriculum.

130. "Faculty Development at Mars Hill College, 1975-1976"
by Kniseley, Hoffman, and Bentley
(23 pages)

Narrative progress report on the Kellogg Foundation funded faculty development program at Mars Hill College.

131. "Bachelor's Degree Requirements Theatre Arts and Speech Competence-Based Curriculum"
by Department of Theatre Arts and Speech
(5 pages)

Presents basic competences of Theatre Arts and Speech. The basic competences are 1 sted in three areas, with each description containing a statement of the competence, the method of evaluation, and the possible ways or experiences by which each student may reach the stated competence.

132. "Experential Learning in a Competence-Based Curriculum: The Question of Quality Control of Education Standards"
by E. L. Angus and C. E. Leininger
Mars Hill College, November 10-12, 1974
(7 pages)

This paper prepared for the Conference on Quality Control in Higher Education held at Antioch College in Columbia, Maryland. Presents discussion of the concept of a Competence-Based, Liberal Arts curriculum, a paradigm competence statement on values, and Experential Learning in the context of a competence-based curriculum.

133. "Thoughts on the Personal Knowledge Competence"
(5 pages)

Discusses the development of personal knowledge as a generic competence.

Facilitative Human Resources-CBE

In addition to the Learning Resource Centers of the Extended Degree Network, the following are knowledgeable and are possible resources for CBE.

Generic Competencies (not in any particular order)

Richard C. Giardina, Director
University Division of General Studies
Bowling Green State University
Bowling Green, Ohio 43402

Mark A. Schlezinger,
Assistant Director
CUE Center
Bowling Green State University
Bowling Green, Ohio 43402

Gary A. Wooditsch
Competency-Based Undergraduate Education
Bowling Green State University
Bowling Green, Ohio 43402

Sister Georgine Loaker
Office of Assessment Design
Alverno College
Milwaukee, Wisconsin 53201

Sister Austin Dolarty and
Sue Dries,
Assistant Kellogg Project Directors
Alverno College
Milwaukee, Wisconsin 53201

David Kniseley
Mars Hill College
Mars Hill, North Carolina 28754

Caroline G. Brownlee, Academic Dean
Sterling College
Sterling, Kansas 67579

Sister Virginia Clair Duncan
Our Lady of the Lakes College
San Antonio, Texas 78201

Jules O. Pagano, Dean
Program Development
Florida International University
Tamini Trail
Miami, Florida 33199

Competency in a Professional or Vocational Role

Stephen Sunderland
College for Human Services
201 Varick Street
New York, New York 10014

Joseph J. Mehr
Center for Human Potential
725 North Spring Street
Elgin, Illinois 60120
(Mental Health Workers)

Frances Prindle
Seattle Central Community College
401 Queen Anne Avenue
Seattle, Washington 98101
(Human Service Careers)

Donald Wolfe
Case Western Reserve University
University Circle
Cleveland, Ohio 44106
(Organizational Behavior)

John Strange, Dean
College of Public and Community Service
University of Massachusetts
Boston, Massachusetts 02125

Judd Adams
Sangamon State University
Springfield, Illinois 66278
(History)

Phillip C. Dumas
Washington State College
Ellensburg, Washington 98926
(Biotechnology)

Allen Schnieder
U.S. Office of Education
Washington, D. C. 20202
(CBTE)

H. Del Schalock
Oregon College of Education
Monmouth, Oregon 97361
(CBTE)

Eugene Kray
Dean of Community Education
Delaware County Community College
Media, Pennsylvania 19003

W. Robert Houston, Associate Dean
College of Education
University of Houston
Houston, Texas 77004

Bruce R. Joyce
Stanford Center for Research
and Development in Teaching
Sanford University
Sanford, California 90005
(CBTE)

Coit Butler
College of Community Studies
University of Massachusetts
Park Square
Boston, Massachusetts 02100

Edgar Cahn
Anitoch School of Law
Washington, D. C. 20016

Gary W. Peterson
Florida State University
Tallahassee, Florida 32307
(Several Disciplines)

PaCBTE Consultant Group
Sam B. Craig, Coordinator
Box 911
Department of Education
Commonwealth of Pennslyvania
Harrisburg, Pennsylvania 17126

Joel Burdin
AACTE
One Dupont Circle
Suite 610
Washington, D. C. 20086

Carl A. Grant
School of Education
University of Wisconsin
Madison, Wisconsin 53706
(CBTE)

Gene E. Hall
Research and Development
Center for Teacher Education
The University of Texas
Austin, Texas 78712
(CBTE)

Frederick J. McDonald
National Commission on PBE
Educational Testing Service
Princeton, New Jersey 08540
(CBTE)

Gilbert F. Shearron
Chairman, Elementary Education
University of Georgia
Athens, Georgia 30602
(CBTE)

Malcolm Knowles
Adult and Community College
North Carolina State University
Raleigh, North Carolina 27606

Competency as a Course-specific (Discipline-Mastery Attainment

Samuel Postlethwait
Purdue University
West Lafayette, Indiana 47901

Center for Personalized Instruction
Georgetwon University
Washington, D. C. 20016

W. J. Westerheide
College of Arts and Sciences
Oklahoma City, Oklahoma 73106

Carl Arendsen, Acting Dean
Grand Valley State College
Allendale, Michigan 49401

John W. White, Dean
College of Arts and Sciences
Oklahoma City University
Oklahoma City, Oklahoma 73106

Phyllis Colyer
College of Arts and Sciences
Oklahoma City University
Oklahoma City, Oklahoma 73106